5inch HDMI LCD (G)

From Waveshare Wiki

Contents

Introduction

800x480, 5 inch Resistive Touch Screen LCD, HDMI interface, supports various systems

 More (https://www.waveshare.com/5inch-hdmi-lcd-g.htm)

Working with PC

Connect the LCD to your PC (USB Port of LCD -> USB Port of PC; HDMI Port of LCD -> HDMI Port of PC. Please first connect the USB Ports then connect the HDMI Port). A new touch drive will be recognized by Windows and you can use the LCD as a human interface device. When multiple displays are detected by your PC, the LCD can only be used to control the cursor on main display. So it is proposed to set the LCD as the main display.

Touch Settings on Win 10 PC

Some users want to connect more than one display to their PC. Here we talk about how to setting the touch to make the touchscreen to control its screen separately.

- Connect touchscreen to PC. Here we use an standard PC monitor and connect an 7inch HDMI LCD (C) for example. We make the monitor as main screen and the touchscreen as secondary screen.
- By default,The touchscreen can only control cursor on the main screen. Here we set it to control the secondary screen
- Open Control Panel and search Tablet PC setting on the control panel and open the tool

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5inch HDMI LCD (H)
Supports various systems

5 inch Capacitive Touch Screen LCD, HDMI interface, supports various systems

Primary Attribute

Category: OLEDs / LCDs, LCD, Raspberry Pi LCD

Brand: Waveshare

Website

English: Waveshare website (https://www.waveshare.com/5inch-hdmi-lcd-g.htm)

Chinese: 官方中文站点 (http://www.waveshare.net/shop/5inch-HDMI-LCD-G.htm)

Onboard Interfaces

USB	HDMI

Related Products

- 15.6inch HDMI LCD (H) (with case)
- 15.6inch FHD Monitor
- 13.3inch HDMI LCD (H) (with case) V2
- 13.3inch HDMI LCD (H) (with case)
- 11.6inch HDMI LCD (H) (with case)
- 10.1inch HDMI LCD
- 10.1inch HDMI LCD (B) (with case)
- [Retired] 10.1inch HDMI LCD (D) (with case)
- 10.1inch HDMI LCD (H) (with case)
- 7inch HDMI LCD (H) (with case)
- 7inch HDMI LCD (C)
- 7inch HDMI LCD (B)
- 7inch HDMI LCD
- 7inch DPI LCD
- 5inch HDMI LCD (H)
- **5inch HDMI LCD (G)**
- 5inch HDMI LCD (B)
- 5inch HDMI LCD
- 5inch DPI LCD
- 5.5inch HDMI AMOLED
- 4.3inch HDMI LCD (B)
- 4.3inch HDMI LCD
- 4inch HDMI LCD (H)
- 4inch HDMI LCD
- 4inch RPi LCD (C)
- 4inch RPi LCD (A)
- 3.5inch HDMI LCD
- 3.5inch RPi LCD (C)
- 3.5inch RPi LCD (B)
- 3.5inch RPi LCD (A)
- 3.2inch RPi LCD (C)
- 3.2inch RPi LCD (B)

- 2.8inch RPi LCD (A)
- 2.23inch OLED HAT
- 1.3inch OLED HAT
- 1.3inch LCD HAT
- 1.44inch LCD HAT
- 1.8inch LCD Module
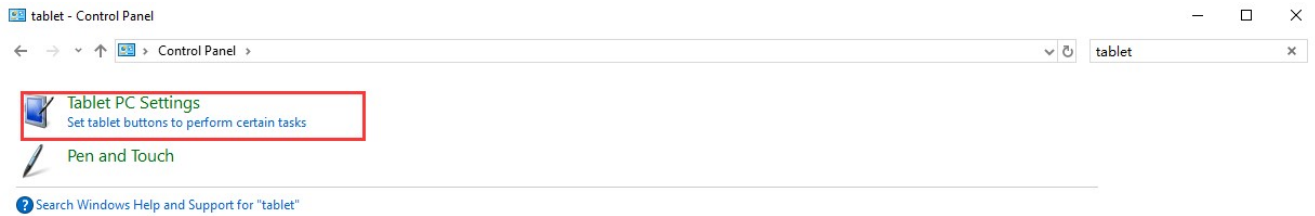
- Click button "Setup..." to setting the touchscreen
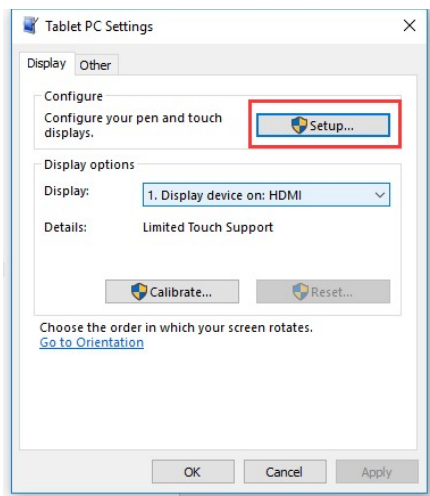
- After click the setup you can find that there is prompt on your first screen with white color background and other screens are white.

Tap this screen with a single finger to identify it as the touchscreen.

If this is not the Tablet PC screen, press Enter to move to the next screen. To close the tool, press Esc.

- If we want the touch of the touchscreen to control the desktop of the touchscreen itself. Just press Enter key to pass the first screen. And the second screen, when you find that the black text is displayed on the touchscreen, just touch the center of the touchscreen to finish this setting.

- After this setting, the touch on the screen will just control this touchscreen even thought it is not the main screen.

Note:

1 If the first screen and the second screen are touchscreen as well, you can touch them when the text is displayed on the screens. Then you can find that all the touchscreen can work.

2 This method is just tested on win 10 PC.

Working with Raspberry Pi

For the Windows OS on PC, the resolution of the LCD is automatically identified. Hence, you do not need to make the relative settings. When working with Raspberry Pi, you should set the resolution of the LCD by yourself, or else the LCD screen will not work. For more detail information, please read the following section.

Turn on the "backlight" switch then connect the LCD to your Pi (HDMI Port of LCD -> HDMI Port of Pi; USB Port of LCD -> USB Port of Pi; 5V~2A power supply). Download the Raspbian image from Raspberry Pi web site (https://wwfw.raspberrypi.org/downloads/). Write the image to a TF card and append the following lines to the config.txt file which is located in the root of your TF card:

```
max_usb_current=1
hdmi_group=2
hdmi_mode=87
hdmi_cvt 800 480 60 6 0 0 0
hdmi_drive=1
```

You must make sure that there are no spaces on either side of the equal sign.

Save and connect the TF card to your Pi then power up.

Note: Resolution of Ubuntu Mate OS or Windows 10 IoT Core OS can also be set properly by editing config.txt.

Calibration in Raspbian

If a latest Raspbian OS is in used, you should connect your Pi to the internet and install xserver-xorg-input-evdev.

```
sudo apt-get install xserver-xorg-input-evdev
```

- Just be sure that evdev.conf has a higher number than 40-libinput.conf. For example, rename 10-evdev.conf to 45-evdev.conf. this forces evdev to load after libinput.

```
sudo cp -rf /usr/share/X11/xorg.conf.d/10-evdev.conf /usr/share/X11/xorg.conf.d/45-evdev.conf
sudo reboot
```

This LCD can be calibrated using a program called xinput_calibrator and you should get and install the program manually with

```
sudo apt-get install -y xinput-calibrator
```

Enter the following commands for touch screen calibration:

```
sudo DISPLAY=:0.0 xinput_calibrator
```

or select Menu -> Preferences -> Calibrate Touchscreen.

After running these commands, there will be a prompt for four-point calibration shown in the LCD screen. Click the points one by one to finish the touch calibration. Then, the new calibration data will be displayed in the terminal, as shows below. Please get these data for future use.

```
Doing dynamic recalibration:
Setting new calibration data: 3919, 208, 236, 3913
```

Enter the following command to edit 99-calibration.conf:

```
sudo nano /etc/X11/xorg.conf.d/99-calibration.conf
```

Then, the old calibration data will be displayed in the terminal:

```
Section "InputClass"
Identifier      "calibration"
MatchProduct    "ADS7846 Touchscreen"
Option "Calibration"   "160 3723 3896 181"
Option "SwapAxes"      "1"
EndSection
```

Modify the calibration data to the new calibration data displayed in the step 2):

```
Section "InputClass"
Identifier      "calibration"
MatchProduct    "ADS7846 Touchscreen"
Option "Calibration"   "3919 208 236 3913"
Option "SwapAxes"      "1"
EndSection
```

Press the keys Ctrl+X, and select the option Y to save the modification.

The modification will be valid after rebooting the system. Enter the following command for system reboot:

```
sudo reboot
```

Resources

- User Manual (https://www.waveshare.com/w/upload/a/a9/5inch_HDMI_LCD_G_User_Manual_en.pdf)

External guides

- Woring with Volumio (https://www.waveshare.com/w/upload/1/1f/Working_with_Volumio.pdf)

3D file

- 3D file (https://www.waveshare.com/w/upload/a/a3/5inch_HDMI_LCD_RTD2660.zip)

Backlight Control

Note: We don't recommend you to do any hardware modification, which may damage LCD if you are not good at it. So be careful when you following this manual

- PWM control brightness of LCD

Support

Contact your seller (fast response and most recommended)

or send emails to **service@waveshare.com** (not fast enough but please be patient) for help.

Our working time: 09:00-18:00 (**UTC+8** Monday to Saturday)

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